

PRINTERS & SCANNERS

FAQ

Q Would a sheet-feed scanner make it faster and easier to scan large numbers of photos?

A Sheet-feed scanners can scan multiple pages as a batch job, but they're not suitable for high-quality photo scanning. They use rollers to pull pages across the scan head, and this can damage or curl photos.

Sheet-feed scanners are ideal for document archival – even the small Fujitsu ScanSnap S300 (see page 38) can scan at up to 10 A4 sheets per minute – but their speed comes at the cost of image quality. Most sheet-feed scanners have a maximum resolution of 600dpi. This is the minimum we'd recommend for good-quality scans. Another problem is that the imaging hardware in sheet-feed scanners is inferior to that of most flatbed scanners.

If you need quick, low-resolution copies of photos and don't mind the risk of damaging them, a sheet-feed scanner could be the answer, but we recommend a flatbed if you want to preserve your memories without destroying them.

Kat Orphanides

Printers and audio expert

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XEROX Phaser 6125

★★★★

£139 inc VAT
From www.kikatek.com

Xerox's Phaser 6125 is an inexpensive colour laser that's an obvious choice for small and home offices wanting to print colour documents quickly. It's also compact, measuring just 389x400x394mm, which is helpful if you have limited space. It has Ethernet and USB ports, so you can connect to it to a network or directly to a computer. The network administration interface and the menus displayed on the printer's mono LCD screen are easy to use. It was easy to set up, but the installer failed to auto-detect it over our network, so we had to enter its IP address manually.

Print quality is reasonably good, but unremarkable. It's adequate for most tasks, with no major flaws in our text, mixed colour, or photo quality tests. Text looked sharp and black, and colour images were clean. We noticed a slight red tint on shaded greyscale images printed in mixed-colour mode. This was a minor problem and printing in true greyscale eliminated it. The same red tinge was visible in pale areas of our high-quality photo prints. Envelopes printed without being creased in the process.

The 6125 managed just 9.1ppm in our mono text print speed test, slower than any printer in our recent colour laser printer Labs (see *Shopper* 240). It was surprisingly quick for its price in our colour speed test, printing 24 mixed colour pages at 6.6ppm. This is thanks to its single-pass engine, although 6.6ppm is slow compared with other single-pass lasers. If you're just printing a single page of text, you'll have to wait 20 seconds for it to appear.

The Phaser 6125's greatest problem is its high print costs. A



single page of mixed colour and black costs 10.9p: 1.9p for the mono elements and 9p per page for colour. Long-term running costs are also high. The drum lasts for just 30,000 pages, and can't be replaced. The high cost of toner soon mounts up if you do a lot of printing. There's enough toner to print 500 black and colour pages out of the box; replacement toner cartridges are available only in 2,000- and 1,000-page capacities for black and colour respectively.

Although its colour print costs were slightly higher, we prefer TallyGenicom's 8108N (see 'Also consider...', opposite). It costs over £20 less, has much faster mono print speeds and lower overall running costs. However, Xerox's Phaser 6125 is cheap to buy and could be worth the small premium if you want slightly faster colour speeds but don't print many pages. Its limited lifespan is unlikely to affect most home users, and it doesn't take up much space. If you do a lot of printing, you'll save money by buying a more expensive laser, such as HP's LaserJet 3600 (see 'Also consider...', opposite).

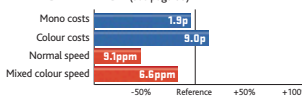
Kat Orphanides

SUMMARY

- ✓ Inexpensive to buy
- ✗ Non-replaceable drum
- ✗ Expensive to run

HOME/SMALL OFFICE COLOUR LASER
600x600dpi, 16ppm mono, 12ppm colour,
USB Hi-Speed, 10/100 Ethernet interfaces,
one-year onsite warranty. Power
consumption 2W standby, 385W printing
PART CODE 6125V_N
DETAILS www.xerox.co.uk

PERFORMANCE (see page 66)



Also consider...

SAMSUNG ML-2510

★★★★★

£60 inc VAT
From www.ebuyer.com

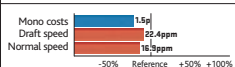
COMPUTER SHOPPER
BEST BUY



This grey laser printer may look a little drab, but it's easy to set up and quick to install. Samsung's ML-2510 has a 250-sheet covered input tray and a single-sheet multipurpose feed slot, although it crumples envelopes.

It peaked at 22.7ppm when printing text, which is impressive for such an affordable printer. It's also cheap to run, with a cost per page of around 1.5p, yet it produces high-quality text and mono graphics. It's a great compact budget mono laser printer.

MONO LASER PRINTER
1,200x600dpi resolution, 24ppm
maximum speed, parallel and
USB Hi-Speed interfaces
PART CODE ML-2510
DETAILS www.samsung.co.uk
FULL REVIEW Oct 2006



CANON Pixma MP520

★★★★★

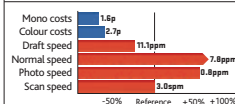
£73 inc VAT
From www.oyyy.co.uk

COMPUTER SHOPPER
BEST BUY



The Pixma MP520 combines an affordable price with quick print speeds and low page costs. Even at draft quality, its text document prints looked great, while its normal-quality prints were laser-sharp. Draft prints were slow, but normal-quality documents printed at 7.8ppm. Photo prints were good, too. The scanner interface doesn't list its top resolution of 1,200x2,400dpi, but you can set this manually. Scans at all resolutions were sharp and accurate.

COLOUR INKJET MFP
4,800x1,200dpi print resolution,
30ppm mono/20ppm colour
maximum speed,
1,200x2,400dpi scan resolution,
USB Hi-Speed, PictBridge USB
interfaces
PART CODE 2178B008AA
DETAILS www.canon.co.uk
FULL REVIEW Jan 2008



RICOH Aficio GX2500



£116 inc VAT

From www.inception-store.co.uk

Ricoh's bulky, dated-looking Aficio GX2500 is the latest printer to use the company's GelSprinter ink technology. It's an alternative to traditional inkjets and uses gel-based ink. GelSprinter printers claim to have several advantages over inkjet printers: faster print speeds, shorter drying times and better sunlight and water resistance. Ricoh also claims that they're more economical to run.

We've previously found GelSprinter-based printers to have poor print quality and expensive consumables, so were interested to find out whether the GX2500 could impress us. It's bulky for an inkjet, weighing in at 13kg and measuring 416x440x249mm. However, to compare the GX2500 to a home-oriented photo inkjet would be a mistake: this is an out-and-out business printer. The figures make this abundantly clear: a 250-sheet paper tray and a 6,000-sheet monthly duty cycle. You certainly won't find any memory card readers or colour screens here – just a mono screen for making basic menu settings.

Slots for the four gel cartridges are hidden behind a flap at the front of the printer. Setup instructions were easy to follow and the driver was quick to install. After installing the ink cartridges, we had to wait five minutes for ink to be loaded into the machine.

Print-head alignment is necessary to ensure the best results from the

GX2500, but it isn't made easy.

The instructions in both the alignment utility and the user guide are obscure and badly written, although the print-head alignment process itself is quick, requiring you to print just a single page.

Print speeds were quick, thanks to an extra-wide print head for printing more lines at once and a belt transfer system instead of traditional rollers. However, normal-quality mono text prints appeared at 9.8ppm – a good result, but not as fast as we've seen from some inkjets. Speed appears to have come by compromising quality. Even at full quality, text looked slightly fuzzy and became more so at normal and draft settings.

Colour print speeds of 6.9ppm would have been impressive if the print quality weren't so poor, with broken, poorly defined lettering. The same document was much more readable at the highest quality setting, but printed more slowly at 3.8ppm.

The GX2500 can print at photo quality if you select the highest quality and glossy paper settings. Unfortunately, we had to wait over seven-and-a-half minutes for two 10x8in prints and quality was poor on generic A4 photo paper. Bright colours appeared faded, pale tones looked pink and we could see marks left by the print head. The printer can't print on 6x4in paper, even using the custom paper size settings.



Ricoh claims that colour prints can be made at a similar cost to mono, but this presumably applies only under some very specific and unusual circumstances. By our calculations, a mono page at five per cent coverage costs 1.8p, while full colour costs 9.9p. That's a total of 11.7p for a page of mixed colour and black printing, far more expensive than any inkjet or laser printer we've seen recently, and more expensive than entry-level colour lasers.

Consumables are expensive but have a high capacity, so you shouldn't have to buy them too often. According to the GX2500's ink monitors, the cartridges that come with it are only half full.

With GelSprinter, Ricoh has attempted to provide laser speeds and inkjet affordability, but the GX2500 fails on both counts. It also lacks a network interface, so isn't much good for workgroup use.

If you want fast, economical colour prints you'd be better off with the similarly priced TallyGenicom 8108N (see 'Also consider...', below), which also has a network interface as standard. Alternatively, the more expensive HP Colour LaserJet 3600 (see 'Also consider...', below) will be cheaper in the long run as its running costs are significantly lower.

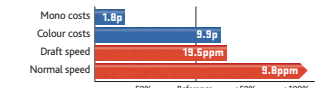
Kat Orphanides

SUMMARY

- ✓ Fast print speeds
- ✗ Poor quality
- ✗ High print costs

FOUR-COLOUR INKJET 3,600x1,200dpi maximum resolution, USB Hi-Speed interface, two-year onsite warranty. Power consumption 2W standby, 26W printing
PART CODE 405599K1
DETAILS www.ricoh.co.uk

PERFORMANCE (see page 66)



CANON Pixma iP4500



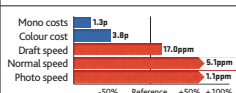
£62 inc VAT

From www.lambda-tek.com/componentshop



This is one of the best budget inkjets we've seen, beating pricier models for speed and quality. It takes five ink cartridges, including both dye and pigment-based blacks to create deep shadows in photos and pin-sharp text. Costs are exceptionally low, making the iP4500 cheaper to run than many laser printers. There's no screen or media card reader, but it does have two paper trays and an automatic duplexer, and can print on CDs.

INKJET PRINTER Five-colour inkjet, 9,600x2,400dpi maximum resolution, USB and PictBridge USB interfaces
PART CODE 2171B008AA
DETAILS www.canon.co.uk
FULL REVIEW Dec 2007



HP Color LaserJet 3600



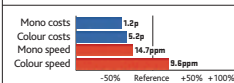
£247 inc VAT

From www.redstore.com



This is a fast USB laser printer with excellent print quality. The only consumable is the toner cartridges, which incorporate the drum. These are economical if you buy high-yield versions, and the device comes with 6,000 mono and 4,000 colour pages' worth of toner. Print speeds were quick at 14.7ppm mono and 9.6ppm colour, and we were impressed by the sharp mono text and accurate colour prints.

HOME/SMALL OFFICE COLOUR LASER 600x600dpi, 17ppm mono/17ppm colour, USB Hi-Speed interface
PART CODE Q5986A
DETAILS www.hp.co.uk
FULL REVIEW Feb 2008



TALLYGENICOM 8108N Colour Laser Printer



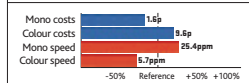
£113 inc VAT

From www.printerland.co.uk



TallyGenicom's 8108N is the cheapest colour laser printer we've ever reviewed. Sharp mono text prints were produced at a phenomenal 25.4ppm. Colour prints were slower (at 5.7ppm) and cost an expensive 9.6p per page, but we were impressed by their quality. The 8108N has both network and USB ports, making it an ideal budget choice for a home or small office, despite its non-replaceable drum.

HOME/SMALL OFFICE COLOUR LASER 600x600dpi, 31ppm mono/8ppm colour, USB Hi-Speed 10/100 Ethernet interfaces
PART CODE 043792
DETAILS www.tallygenicom.co.uk
FULL REVIEW Feb 2008



FUJITSU ScanSnap S300

★★★★★

£201 inc VAT

From www.lambda-tek.com/componentshop

Most sheet-feed scanners are bulky, desk-bound devices, but the ScanSnap S300 is the smallest A4 scanner we've ever reviewed and is designed to fit into a bag with a laptop. It can hold up to 10 A4 pages and can simultaneously scan both sides. It comes with both mains and USB power adaptors, but USB power requires two ports on your computer and scans run at around half the speed.

Scanning a 10-page colour document at its lowest resolution took 59 seconds. At 150dpi, this setting (labelled Normal) is suitable only for the most basic document archival. Although font sizes as small as 5pt were captured accurately, letters looked rough around the edges. Higher-resolution scans took longer – a single colour A4 page at 600dpi took 45 seconds to scan, but we couldn't fault the quality. Colours were generally accurate, but yellow tones were slightly oversaturated.

Installation was simple, though not quick. The S300 will work only if you use Fujitsu's own software. There's no TWAIN or WIA driver, so you can't use it directly with other document management programs.

Fortunately, the ScanSnap Organiser software is excellent and did a far better job of managing scanned documents than its competitors, such as the basic versions of Nuance's Omnipage and PaperPort programs that come with many HP and Canon scanners.

ScanSnap Organiser automatically collated our documents into PDF files, correctly orienting them and



discarding blank pages as it went. Scanned documents were compressed before being saved. Embedded OCR software can process scanned pages and transform them into fully searchable PDFs, which is a great feature. This took a long time but the results were outstanding. There's no way to combine PDFs after they've been scanned, or to create batch-scan jobs of more than 10 pages.

The S300 also comes with CardMinder business card-scanning software. This wasn't as good at recognising names and numbers as other business card OCR programs we've seen, such as IRIS's Cardiris Pro. It couldn't read cards that were scanned upside down and, like most business card-readers, couldn't handle dark cards with pale fonts.

The S300 is inexpensive compared to most sheet-feed scanners. We were impressed by the effective document management software and accurate, searchable PDFs. We'd have liked a batch-scan feature and the option of using other programs, but there's little else to fault. It's no use if you want to scan photos or artwork and its small tray isn't hugely convenient, but its compact size makes it a perfect choice if space is limited.

Kat Orphanides

SUMMARY

- ✓ Small; easy to use
- ✓ Easily creates searchable PDFs
- ✗ No TWAIN driver or batch scanning

CIS SHEET FEED SCANNER 600x600dpi optical resolution, USB Hi-Speed interface. Power consumption 2W standby, 5W scanning
PART CODE PA03541-B001
DETAILS www.fujitsu.com

PERFORMANCE (see page 66)



CHOOSING A... Multi Function Peripheral

Follow the steps to find your ideal specs

PRINT TECHNOLOGY: Inkjet

PRINT RESOLUTION: 4,800x1,200dpi

SCAN RESOLUTION: 600x2,400dpi

INTERFACES: USB

EXTRA:

Recommended minimum in grey

A multifunction peripheral combines a printer and scanner into a single compact unit, and also provides copying and fax facilities. This saves desk space and also money, compared with buying two or more separate devices.

1 Basic models cost as little as £40 including VAT, with specifications similar to those shown in grey above. These are OK if funds and space are tight, but quality and speed will be basic, and copying and faxing may not be possible without the help of the PC.

2 Spending more invariably gives you improved speed and image quality. These improvements aren't directly proportional to price, though, so read our reviews for details. Remember that running costs can outweigh the price of the unit.

3 Sheet-fed scanners handle multiple pages but flatbeds tend to give better image quality. Cheaper models make you choose one or the other, while pricier units combine both features.

4 If you'll be using the printer regularly, consider a laser rather than an inkjet model. These benefit from improved print speeds and lower running costs, and cost from around £120 including VAT. You'll need to spend a lot more for a colour laser-based machine.

5 To make the most of the standalone functions, you'll want decent front-panel controls. These can vary from a single copy button to something resembling a dedicated copier. If fax is important, you need to check that the device has a built-in modem.

6 Other useful extras to consider are memory card slots, duplexing units for the printer and/or scanner, additional paper trays and an Ethernet port to connect the device to a network.

Also consider...

EPSON Perfection V200 Photo

★★★★★

£60 inc VAT

From www.fotosense.co.uk

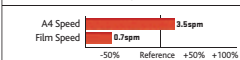
COMPUTER SHOPPER
BEST BUY

Epson's Perfection V200 Photo produces sharp, accurate scans up to a maximum optical resolution of 3,200x9,600dpi. Colour quality is excellent, with particularly good reproduction of pale and bright tones. The software includes a full range of image-correction options, including dust removal for damaged negatives.

The resolution of 3,600dpi may be limiting if you want to make particularly big enlargements, but otherwise this is an excellent choice.



CCD FLATBED SCANNER 3,200x9,600dpi optical resolution, 48-bit colour output, USB Hi-Speed interface
PART CODE B11B188032
DETAILS www.epson.co.uk
FULL REVIEW May 2008



LEXMARK Z1320

★★★★★

£21 inc VAT

From www.misco.co.uk

COMPUTER SHOPPER
BUDGET BUY

PRICE CUT!

Lexmark's Z1320 is one of the smallest and most affordable single-function inkjets we've seen.

Unlike most budget inkjets, it combines reasonable print costs and speeds with good-quality document and photo printing. We were impressed by its clear and readable draft documents. Our only complaint is that its output tray is a little bit flimsy.



FOUR-COLOUR INKJET 4,800x1,200 resolution, USB Hi-Speed interface
PART CODE 20A0402
DETAILS www.lexmark.co.uk
FULL REVIEW Dec 2007

